

### **REMARKS**

Applicants respectfully request consideration of the subject application as amended herein. An RCE accompanies this Amendment. This Amendment is submitted in response to the Final Office Action mailed May 19, 2005. Claims 1-28 and 30-37 are rejected.

In this Amendment, claims 1 and 35-37 have been amended. Claim 4 has been canceled without prejudice. It is respectfully submitted that the amendment does not add new matter.

Applicants reserve all rights with respect to the applicability of the Doctrine of equivalents.

#### **Claim Rejections under 35 U.S.C. §112**

The Examiner has rejected claims 1 and 35 and associated dependent claims under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. Applicants respectfully submit that claims 1 and 35, as amended, satisfy the requirements of 35 U.S.C. 112, second paragraph.

#### **Claim Rejections under 35 U.S.C. §103(a)**

The Examiner has rejected claims 1-7 under 35 U.S.C. §103(a) as being unpatentable over Jordan et al. (USPN 6,438,652, "Jordan") in view of Brendel et al. (USPN 5,774,660, "Brendel"). The Examiner has rejected claims 8-10, 21-28 and 34-37 under 35 U.S.C. §103(a) as being unpatentable over Jordan and Brendel in further view of Rune (USPN 6,304,913). The Examiner has rejected claims 11-15, 30 and 32-33 under 35 U.S.C. §103(a) as being unpatentable over Jordan and Brendel in further view of Johnson et al. (USPN 6,205,477, "Johnson"). The Examiner has rejected claims 16-20 under 35 U.S.C. §103(a) as being

unpatentable over Jordan and Brendel in further view of Chauhan (EP 0959 601).

In the present case, the combination of Jordan and Brendel does not teach or even suggest each and every element of the present claims. In particular, the present claim includes the feature of “determining one or more information object repositories from a plurality of information object repositories to service the client’s request for the information object without regard as to whether the information object is actually stored at the information object repository selected according to load on the information object repositories and at least one type-of-service parameter, *wherein the type-of-service parameters comprise an average delay from the information object repositories to the client, average processing delays at the information object repositories, reliability of a path from the information object repositories to the client, and available bandwidth in said path.*” (Claim 1, as amended; emphasis added).

Jordan describes a redirection scheme in which a load balancer is used to orchestrate redirection made by a number of cooperating cache servers. In the event that the information object is unavailable in the selected cache server, the load balancer determines which cache should respond to the selected cache server depending on the load conditions. In particular, Jordan teaches that the load monitor “examines the load table 102 to see if the owner is currently overloaded (and that the forwarding frequency 1011 is a significant contributor thereto), in step 204. If yes, in step 205, the load monitor finds an underloaded (or less loaded) cache server and assigns it as the new 10122 (or shared) owner 10122 of the requested object” (Jordan, Col.6, lines 58-64). In the areas cited by the Examiner, and elsewhere, Jordan discloses that a load monitor can decide whether to continue shifting some or all forwarded requests from the overloaded cache server to the underloaded cache server based on the load condition of the servers, the forwarding frequency (the number of times a request for an object has been forwarded through the load monitor) and time stamp information. (Jordan, col. 6, lines 25-28,

33-35, 46-49). Thus, Jordan does not teach or suggest type-of-service parameters that include an average delay from the information object repositories to the client, average processing delays at the information object repositories, reliability of a path from the information object repositories to the client, and available bandwidth in said path, as claimed.

The additional teachings of Brendel do not render the present claims obvious. Brendel describes a method in which a load balancer is used to redirect a client request to one of the servers in a server farm. In particular, Brendel specifically teaches a balancing means which “receives the list of network nodes containing the requested resource. It chooses as an assigned node one of the network nodes in the list of network nodes. Thus the load balancer chooses an assigned node based on the resources contained by each network node. The load balancer performs resource-based load balancing” (Brendel, Col. 6, lines 53-58). It will be noted that Brendel, too, fails to teach the presently claimed feature of type-of-service parameters that include an average delay from the information object repositories to the client, average processing delays at the information object repositories, reliability of a path from the information object repositories to the client, and available bandwidth in said path. Consequently, the present claims are patentable over the combination of Jordan and Brendel as the combination fails to teach or even suggest each and every element of the present claims.

Applicants respectfully submit that none of Rune, Johnson, and Chauhan supplies the missing limitations. Rune describes a method for selecting a closest server based on hop counts, which may be computed in different ways (Rune, Col. 4, lines 29-47). Johnson describes a method for distributing service requests among a number of servers according to position metrics, in particular, the total number of service requests that each of the server is designed to service. Chauhan describes a method for selecting a server from among a number of mirrored

sites. None of Rune, Johnson, and Chauhan teaches or suggests the presently claimed feature of type-of-service parameters that include an average delay from the information object repositories to the client, average processing delays at the information object repositories, reliability of a path from the information object repositories to the client, and available bandwidth in said path. Therefore, any combination of the references does not teach or suggest each and every limitation of claim 1.

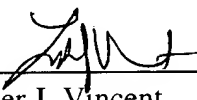
Given that claims 2-3, 5-28 and 30-37 are dependent claims with respect to claim 1, directly or indirectly, and add limitations, applicants respectfully submit that these claims are likewise patentable over the references cited by the Examiner.

Applicants respectfully submit that in view of the amendments and discussion set forth herein, the applicable rejections have been overcome. Accordingly, the present and amended claims should be found to be in condition for allowance.

If there are any additional charges/credits, please charge/credit our deposit account no. 02-2666.

Respectfully submitted,  
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